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# *The Commonwealth of Massachusetts*

## *Department of Public Safety*

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### **MEMORANDUM OF TECHNICAL REQUIREMENT**

**TO:** All Building Departments, State Building Inspectors, Home Builder Organizations and all Other Interested Parties

**From:** Tom Riley, Code Development Manager, DPS/BBRS

**Date:** February 27, 2006

**Subject:** The Need to Use an Updated Version of REScheck When Demonstrating State Building Code Energy Code Compliance // Appendix J

#### **TECHNICAL REQUIREMENT:**

At its February 14, 2006 monthly meeting, the Board of Building Regulations and Standards (BBRS) VOTED to require the use of REScheck, Version 3.7, Release 1b or later, in lieu of earlier software tools MAScheck and MECcheck.

REScheck Version 3.7, Release 1b can be obtained, free of charge at the following web site:

[www.energycodes.gov/rescheck](http://www.energycodes.gov/rescheck)

This technical requirement is driven by Federal Law changes to the National Appliance Energy Conservation Act (NAECA – 2005, see DETAIL, below).

## **BACKGROUND:**

With the introduction of the current 6<sup>th</sup> Edition State Building Code, new construction low-rise residential buildings (any RESIDENTIAL USE except R-1 USES, up to 3 stories in height) are required to conform to energy conservation requirements of 780 CMR Appendix J.

Of the various ways in which thermal envelope compliance can be demonstrated, over the years, software tools MAScheck and MECcheck have typically been utilized as the compliance software tools to evaluate/demonstrate such compliance.

With certain measurable changes being made to the National Appliance Energy Conservation Act (NAECA-2005) it is **now required** that REScheck, Version 3.7, Release 1b or later be utilized to demonstrate thermal envelope compliance IF the 780 CMR Appendix J, Section J7.0 methodology is chosen.

It is noted that other methods in Appendix J are available to demonstrate thermal envelope compliance and should these other methods be currently utilized, care should be taken to assure that no false credit is being captured for HVAC equipment, that by Federal Regulation, must now meet higher efficiency standards than reflected in current Appendix J compliance methodologies.

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## **NAECA-2005**

The recent updates to the National Appliance Energy Conservation Act (NAECA-2005), establish new efficiency standards for certain heating and cooling systems.

The greatest impact of the new requirements is on residential sized central air conditioners and heat pumps, whose minimum efficiency ratings are now respectively: Seasonal Energy Efficiency Ratio (SEER) of 13 for cooling and a Heating Seasonal Performance Factor (HSPF) of 7.7 for heat pump heating.

The Massachusetts Appendix J Energy Provisions allow thermal envelope tradeoffs (reductions in the efficiency of insulation or windows) if high-efficiency HVAC equipment is installed, but **as of January 23, 2006, air conditioners and heat pumps now need to exceed the new NAECA minimums for such trade-offs to be allowed.** In other words, while "old" equipment can still be installed in new construction, no credit can be taken for trade-offs unless they reflect a baseline of SEER 13 for central air conditioning cooling and HSPF 7.7 for heat pump heating cycle; older, less efficient equipment, may still be installed but such equipment cannot be used to achieve thermal envelope tradeoffs.

For further information, refer to:

[http://www.energycodes.gov/residential\\_ac\\_hp.stm](http://www.energycodes.gov/residential_ac_hp.stm)